



**Clear Copy of Amended Claims with Corrected Claim Numbering**

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I claim:

20. An apparatus for securing structural members of a building together comprising:

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- a. a unitary body having a rectangular face, approximately right angled bends, and tabs;
  - b. said rectangular face having a single tab on the bottom of the long dimension extended downward.
  - c. said rectangular face having a right angled bend on either end of the short dimension forming rafter tabs;
  - d. each of said rafter tabs having right angled bends on the bottom forming plate tabs;
  - e. said rectangular face having a generally right angled bend on the top of the long dimension forming a sheathing tab on opposite ends;

21. The apparatus of claim 20 wherein said rectangular face having a predetermined length as a spacing means for accurate lateral-spacing of adjacent roof structural members along a top plate of a wall during roof construction.

22. The apparatus of claim 20 wherein said rectangular face having a predetermined width as an enclosing means for covering an open space between the bottom of a roof structural member and the top of a top plate.

23. The apparatus of claim 20 wherein said single tab on the bottom of said rectangular face extends down a predetermined distance from said face as a means for extending over an exterior sheathing and underlying structural member.

24. The apparatus of claim 20 wherein said lower tab of said rectangular face having a predetermined area and a plurality of nail holes as a fastening means to said exterior sheathing and underlying structural members.

25. The apparatus of claim 20 wherein said rectangular face having a plurality of ventilation ribs between said rafter tabs on the short ends, and between said sheathing tabs on the top, and said single tab on the bottom, as a means for ventilation.

26. The apparatus of claim 20 wherein the bend line of said bend forming sheathing tabs is generally parallel to the long dimension of said rectangular face, thereby placing said sheathing tabs generally perpendicular to said rectangular face, and generally parallel to the bottom of a roof.

27. The apparatus of claim 20 wherein the bend line of said bends forming said rafter tabs are generally parallel to each short dimension of said rectangular face, thereby placing said rafter tabs perpendicular to said rectangular face and against opposite faces of adjacent roof structural members.

28. The apparatus of claim 20 wherein said rafter tabs having a predetermined area and a plurality of nail holes as an attaching means to the opposite, vertical edges of said adjacent roof structural members, thereby securing said members together at a predetermined distance.

29. The apparatus of claim 20 wherein the bend lines of said bends forming said plate tabs off each rafter tab are generally perpendicular to said rectangular face, thereby placing said plate tabs parallel and adjacent to the top of the top plate.

30. The apparatus of claim 20 wherein said plate tabs having a predetermined area and a plurality of nail holes as an attaching means to the horizontal, top edge of said top plate, generally next to the roof structural member, and said plate tabs having extension tabs on the top bent inward toward said rectangular face.

31. The apparatus of claim 20 wherein said sheathing tabs, said rafter tabs, and said plate tabs

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having attaching means to adjacent structural members, thereby forming a strong I-beam shape against the roof and wall structural members, as a means for preventing uplift and lateral movement.

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32. The apparatus of claim 20 wherein said single tab on the bottom of said rectangular face, and said plate tabs having a generally perpendicular aspect to each other, and having attaching means to the adjacent, vertical and horizontal faces of a top plate, thereby placing fasteners in shear, and suppressing thrust forces from the roof to the wall on a building.
33. The apparatus of claim 20 wherein said sheathing tabs, said rafter tabs, said plate tabs, said rectangular face, and said single tab on the bottom of said rectangular face form a strong, generally box-shape connection between adjacent rafters, top plate, and roof sheathing on a building, thereby preventing uplift, thrusting, and lateral movement of the roof and the wall, as would occur during wind storms and seismic events.
34. A retrofit apparatus for securing structural members of an existing building comprising:
- a. two generally flat and generally rectangular planes forming left and right faces;
  - b. said rectangular faces having approximately right angled bends on opposite ends of the short sides, forming rafter tabs having a plurality of nail holes;
  - c. said rectangular faces each having a single tab on the long side of the bottom extended down, and having a predetermined area and a plurality of nail holes as a means for attachment to outside wall sheathing and an underlying top plate;
  - d. said rectangular faces each having an approximately right angled bend on top of the long dimension, forming a sheathing tab on opposite ends;
  - e. one of said faces having horizontal tracks with openings on one end, and the other face having runners with arms in the same plane, as a sliding means of lateral sliding of both plates.
35. The apparatus of claim 34 wherein said left and right faces having approximate mirror

image of each other.

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cont

36. The apparatus of claim 34 wherein said tracks on one face allow said runner of other face to enter at the opening, while said arms allow slideable movement along said track.
37. The apparatus of claim 34 wherein said plates move horizontally when coupled together with said runners and said tracks as a means of placing said rafter tabs against vertical faces of adjacent rafters
38. The apparatus of claim 34 wherein said coupled plates move horizontally as a means of placing said rafter tabs against vertical faces of adjacent rafters that are not placed at standard construction spacing.
39. The apparatus of claim 34 wherein said rafter tabs, said lower tab on each said rectangular face, and said sheathing tabs having attachment to said rafters, said outside wall sheathing, and said underlying top plate forming a box-like shape, thereby preventing uplift, thrusting, and lateral movement of a roof and wall of an existing building during strong winds and earth movements.

## RESPONSE

1. The applicant respectfully requests that the examiner grant a one-month extension of time to answer the Office Action of 6/26/02. The applicant has enclosed a check for \$55 for the one month extension.
2. The applicant respectfully requests that the examiner renumber the claims according to examiner's citation. The newly numbered claims are on the clean copy of the claims, but the applicant has used the old claim numbers on the amended claims to answer the examiner's rejections.
3. **Claims 12-31 are rejected under 35 U.S.C. 112 as being indefinite...Claim 12, (1) the limitation "the bulk of the lower part" fails to clearly define the metes and bounds, thus renders the claim indefinite.** To meet the examiner's 112 objection, the applicant respectfully requests amending claim 12. Please change claim 12b from "said rectangular face having the bulk of the lower part extended downward" to "said rectangular face having a single tab on the bottom of the long dimension extending downward".
4. **Claim 12, (2) the limitation "said top bend forming sheathing tabs" is indefinite for failing to clearly define how it is possible that one bend is able to form more than one tab.** The applicant respectfully requests that the examiner refer to the applicant's figure 4. This flat pattern layout shows that when the tool and die machine bends the sheathing tab 8A, both the left sheathing tab 8 and the right sheathing tab 9 will be formed. To make this more clear, the applicant respectfully requests amending claim 12. Please move claim 12e into claim 12d. The amended claim will be: "said rectangular face having [said] a generally right angled bend on the top [side] of the long dimension forming a sheathing tab on either end,".
5. **Claim 15, the limitation "most of the side edges of the top plates of the wall" is indefinite for failing to clearly define the metes and bounds of the claimed invention,**

it is not clear what the applicant is referring to. The applicant respectfully requests that the examiner refer to the applicant's figure 2. This figure shows that the lower tab extends down over the outside sheathing and underlying structural member (top plate). To meet the 112 objection, the applicant respectfully requests that the examiner amend claim 15. Please change claim 15 as follows:

15. The apparatus of claim 12 wherein said [lower part] single tab on the bottom of said rectangular face extends down a predetermined distance from said face as a means for [covering most of the side edges of the top plates of the wall] extending over an exterior sheathing and underlying structural member.

The "single tab on the bottom" meets the 102 objection explained later. The "a predetermined distance" shows how the tab can extend down to cover the side edges of the top plates. Instead of the objected "covering most of the side edges of the top plates" the more accurate "extending over an exterior sheathing and underlying structural member" clearly defines the metes and bounds to meet the 112 objection.

6. **Claim 16, "both plates of said top plate of the wall" lacks antecedent basis.** The applicant respectfully requests that the examiner use amended claim 15 above, as antecedent basis for "said exterior sheathing and underlying structural member". And the applicant respectfully requests that the examiner amend claim 16 as follows:

16. The apparatus of claim 12 wherein said lower tab [part] of said rectangular face having a predetermined area and a plurality of nail holes as a fastening means to [both plates of said top plate of the wall] said exterior sheathing and underlying structural members.

As explained above, the "exterior sheathing and underlying structural members" in amended claim 16 meets the 112 objection.

7. **Claim 17, "said extended lower part of the long ends" lacks antecedent basis.** The applicant respectfully requests that the examiner examine the applicant's amended claim

12b which now defines "said rectangular face having a single tab on the bottom of the long dimension". Using amended claim 12b, please amend claim 17 as follows:

17. The apparatus of claim 12 wherein said rectangular face having a plurality of ventilation ribs between said rafter tabs on the short ends, and between said sheathing tabs on the top, and said [extended lower part of the long ends] single tab on the bottom, as a means for ventilation.

The "single tab on the bottom now has antecedent basis and meets the 112 objection.

8. **Claims 18, 19, and 21, it is not clear how applicant defines the "Axis" of the bend.**

The applicant originally wanted the "axis" to define the "hinge line" of the bend. Since the applicant has defined this "hinge line" as "bend line" in the specification, the applicant respectfully requests that the examiner amend claims 18, 19, and 21 as follows:

18. The apparatus of claim 12 wherein the [axis] bend line of said bend forming sheathing tabs is generally parallel to the long dimension of said rectangular face, thereby placing said sheathing tabs generally perpendicular to [in front of] said rectangular face, and generally parallel to the bottom of a roof.
19. The apparatus of claim 12 wherein the [axis] bend line of said bends forming said rafter tabs are generally parallel to [the] each short dimension of said rectangular face, thereby placing said rafter tabs perpendicular to said rectangular face and against opposite faces of adjacent roof structural members.
21. The apparatus of claim 12 wherein the [axis] bend lines of said bends forming said plate tabs off each rafter tab are generally [parallel] perpendicular to said rectangular face, thereby placing said plate tabs parallel and adjacent to the [on] top of [a] the top plate.

9. **Claim 21, it is not clear how it is possible for the axis of the plate tabs to be generally parallel to the rectangular face.** The applicant agrees, as it should have been perpendicular, not parallel. The applicant has amended claim 21 above.
10. **Claim 24, "said top plate" lacks antecedent basis.** On claim 24, please change "said top plate" to "a top plate".
11. **Claim 25, "said adjacent rafter, said top plate, and said roof sheathing" lacks antecedent basis.** The applicant has deleted the "said" in front of each member. Please amend claim 25 to the following:
25. The apparatus of claim 12 wherein said sheathing tabs, said rafter tabs, said plate tabs, said rectangular face, and said [lower part] single tab on the bottom of said rectangular face form a strong, generally box-shape connection between [said] adjacent rafters, [said] top plate, and [said] roof sheathing on a building, thereby preventing uplift, thrusting, and lateral movement of the roof and the wall, as would occur during wind storms and seismic events.
12. **Claim 26, "said rectangular faces having the lower long side" should be "said rectangular faces each having the lower long side".** Agreed. Plus, the left and right parts should be defined. The applicant respectfully requests that the examiner amend claim 26 as follows:
26. A retrofit apparatus for securing structural members of an existing building comprising:
- a. two generally flat and generally rectangular planes forming left and right faces;
- [a] b. [two generally flat,] said rectangular faces having approximately right angled bends on opposite ends of the short sides, forming rafter tabs having a plurality of nail holes;
- [b] c. said rectangular faces each having [the lower] a single tab on the long side of the bottom extended down, and having a predetermined area and a plurality of nail holes as a means for attachment to outside wall sheathing and an underlying top plate;
- [c] d. said rectangular faces each having an approximately right angled bend[s] on top of the



- long dimension, forming a sheathing tab[s] on opposite ends;
- [d] e. one of said faces having horizontal tracks with openings on one end, and the other face having runners with arms in the same plane, as a sliding means of lateral sliding of both plates.

13. **Claim 27, "near mirror image" is vague, thus indefinite.** The applicant agrees. Please amend claim 27 as follows:

27. The apparatus of claim 26 wherein said left and right faces having [near] approximate mirror image of each other.

The left and right faces have been defined in amended claim 26.

14. **Claims 12-25 are rejected under 35 U.S.C. 102(b) as being anticipated by USP 5,370,577 to Jonett et al.** Jonett discloses an apparatus for securing structural members of a building, Figs 2-3 comprising all the elements recited in the above listed claims... Jonnet's apparatus is completely different from the applicant's invention, both in physical appearance and function. These physical differences are shown in the applicant's amended claims. Starting with the front view, Jonett's figure 2 shows his apparatus having two tabs 72 and 72' extending downward from the face 22. Jonett's specification states "first and second stud tie down straps 72, 72' are joined to the lower side 28 of the face plate 22." from his column 3, lines 25-26.

The applicant's figure 4 shows only one tab in the center extending downward. To better define the present invention's major physical distinction over Jonett, the applicant respectfully requests that the examiner amend claim 12b (20b). Please change "said rectangular face having [the bulk of the lower part] extended downward" to "said rectangular face having a single tab extended downward". The applicant's amended claim 12 (20) now reads over Jonnet, since Jonnet has two tabs extended downward.

15. Jonnet's figure 2 shows the top of his face plate 22 having an upper rib 26. Jonnet's specification states the upper rib 26 only once, in column 2, line 47. Jonnet never states

the rib's purpose, and it has no fasteners or fastener holes, but it is another physical difference. The applicant's figure 1 shows two tabs on the top of the face. The left and right sheathing tabs 8 and 9 have bolt holes 17 for tying down the roof. Applicant's amended claim 12d (20e) states: "said rectangular face having a generally right angled bend on the top of the long dimension forming a sheathing tab on opposite ends". The applicant's sheathing tabs on opposite ends of the top of the rectangular face is physically different from Jonnet's singular rib, and the applicant's sheathing tabs have a purpose.

16. Referring to Jonnet's figure 3, it can be seen that his first and second top chord truss webs 46 and 46' are bent out from the top of his truss chord flanges 32 and 32'. The applicant's rafter tabs 4 and 5 are comparable to Jonnet's truss chord flanges 32 and 32', and the applicant's left and right reinforcement tabs 18 and 19 (shown on applicant's figure 4) are bent in from the top of rafter tabs. Applicant's figure 1 doesn't show the reinforcement tabs 18 and 19, but they are bent in under the sheathing tabs 8 and 9. Jonnet's top chord truss webs 46 and 46' are bent out, because they lay on the top of the rafter. The applicant's amended claim 22 now claims this physical distinction. Please amend claim 22 as follows:

22. The apparatus of claim 12 wherein said plate tabs having a predetermined area and a plurality of nail holes as an attaching means [for attachment] to the horizontal, top edge of said top plate, generally next to the roof structural member, and said plate tabs having extension tabs on the top bent inward toward said rectangular face.

17. Referring to Jonnet's figure 3, his apparatus has a "back plate 84 (that) is joined to lower side 28 of the face plate 22 and extends from the lower side 28 in a plane which forms an acute angle between the back plate 84 and the face plate 22." from column 3, lines 38-41. The applicant's rectangular face has a single tab extending down from the face as cited on amended claim 12. Therefore, applicant's invention is physically different from Jonnet's apparatus. Applicant's amended claims 12-25 now meet all 112 and 102 objections.

18. Jonnet's apparatus has to be light-gauge to be bendable. Jonnet's figure 4 shows his top chord truss webs 46 and 46' bent over a rafter. Jonnet's specification states: "the truss chord webs 46, 46' are movable or bendable to better facilitate locating the top of the truss chord 12 below the webs 46, 46'. After the top truss chord 12 is positioned below the webs 46, and 46', they can be bent downwardly to overlie the tops of the particular top truss chords 12." from column 4, lines 5-10. If Jonnet's apparatus can be bent by an installer, it cannot prevent hurricane or seismic damage. Therefore, the applicant's amended claims 23-25, which state wind and earthquake resistance, read over Jonnet.
19. Since Jonnet's apparatus has been shown to be bendable, and can simply be bent to fit, there is no need for an adjustable two-piece frieze board like the applicant's apparatus shown in figures 6 and 7 and claimed in claims 26-31. Since Jonnet's apparatus can be bent, it would not be likely that anyone skilled in the art would think of making an adjustable frieze plate. Also, since Jonnet's apparatus is bendable, it cannot possibly prevent hurricane or earthquake damage, and someone skilled in the art would not think of making a strong and adjustable frieze plate.

Referring to Jonnet's figure 5, and column 2, lines 63-65, Jonnet states "The upper edge 40, 40' is disposed in a plane which rises from the first side edge 30, 30' at an acute angle  $\alpha$ , as illustrated in Fig. 5." Therefore, his patent is indefinite. Jonnet's figure 2 shows the top chord truss webs 46 and 46' on top of the roof rafters. Jonnet's figure 4 shows the top chord truss webs 46 and 46' overlap each other on top of the roof rafter. With a double thickness of webs that are bent on to the rafter by a framer, sheets of roof sheathing would not be able to lie flat on the roof. Jonnet's invention will not work, is inoperative, and should construed very narrowly.

The applicant could not get another invention that prevents hurricane damage made in Hawaii, because there was no 100-ton press available for stamping 14-gauge steel. Jonnet's apparatus is made from "light gauge steel using a pattern. An operator then uses

a brake and /or clamps to form the appropriate bends in the stamped piece.” from column 5, lines 16-18. Therefore, Jonnet’s apparatus was designed and patented to permit ventilation and maintain insulation in a desired position. Since it is so bendable, it could not provide any structural integrity to a building and could only be used for ventilation and holding back insulation.

No one skilled in the art had thought of how to make a frieze plate that was not bendable, but could still tie all the structural members together to prevent hurricane and earthquake damage. Until this invention, no one skilled in the art thought of how to tie the roof into the frieze plate. No one skilled in the art thought of making a strong I-beam shape against the roof an wall (claim 23). No one had thought of how to form a strong box-shape between the roof sheathing, roof rafters, and top plate (claim 25).

20. **Conclusion:**

For all the reasons given above, applicant respectfully submits that the amended claims clear 112 rejections, and define over the cited reference under Section 102. The claimed distinctions are of patentable merit under Section 103 because of the tremendous results provided for a homeowner against earthquake and wind damage. Accordingly, applicant submits that this application is now in full condition for allowance, which action applicant respectfully solicits. If the examiner agrees but does not feel that the present claims are technically adequate, applicant respectfully requests that the examiner write acceptable claims pursuant to MPEP 707.07(j).

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Very respectfully,

A handwritten signature in cursive script that reads "Thomas C Thompson". The signature is written in dark ink and is positioned to the right of the typed name.



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## Amended Claims

I claim:

12. An apparatus for securing structural members of a building together comprising:

- a. a unitary body having a rectangular face, approximately right angled bends, and tabs;
- b. said rectangular face having [the bulk of the lower part] a single tab on the bottom of the long dimension extended downward.
- c. said rectangular face having [said] a right angled bend[s] on either [side] end of the short dimension forming rafter tabs;
- [g] d. each of said rafter tabs having [said] right angled bends on the bottom forming plate tabs;
- [d] e. said rectangular face having [said] a generally right angled bend on the top [side] of the long dimension forming a sheathing tab on opposite ends;
- [d. said top bend forming sheathing tabs;]
- [e. said side bends forming rafter tabs;]
- [f. said bends, on said bottom of said rafter tabs, forming plate tabs;]

13. The apparatus of claim 12 wherein said rectangular face having a predetermined length as a spacing means for accurate lateral-spacing of adjacent roof structural members along a top plate of a wall during roof construction.

14. The apparatus of claim 12 wherein said rectangular face having a predetermined width as an enclosing means for covering an open space between the [top] bottom of a roof structural member and the top of a top plate.

15. The apparatus of claim 12 wherein said [lower part] single tab on the bottom of said rectangular face extends down a predetermined distance from said face as a means for [covering most of the side edges of the top plates of the wall] extending over an exterior

sheathing and underlying structural member.

16. The apparatus of claim 12 wherein said lower tab [part] of said rectangular face having a predetermined area and a plurality of nail holes as a fastening means to [both plates of said top plate of the wall] said exterior sheathing and underlying structural members.
17. The apparatus of claim 12 wherein said rectangular face having a plurality of ventilation ribs between said rafter tabs on the short ends, and between said sheathing tabs on the top, and said [extended lower part of the long ends] single tab on the bottom, as a means for ventilation.
18. The apparatus of claim 12 wherein the [axis] bend line of said bend forming sheathing tabs is generally parallel to the long dimension of said rectangular face, thereby placing said sheathing tabs generally perpendicular to [in front of] said rectangular face, and generally parallel to the bottom of a roof.
19. The apparatus of claim 12 wherein the [axis] bend line of said bends forming said rafter tabs are generally parallel to [the] each short dimension of said rectangular face, thereby placing said rafter tabs perpendicular to said rectangular face and against opposite faces of adjacent roof structural members.
20. The apparatus of claim 12 wherein said rafter tabs having a predetermined area and a plurality of nail holes as an attaching means [for attachment] to the opposite, vertical edges of said adjacent roof structural members, thereby securing said members together at a predetermined distance.
21. The apparatus of claim 12 wherein the [axis] bend lines of said bends forming said plate tabs off each rafter tab are generally [parallel] perpendicular to said rectangular face, thereby placing said plate tabs parallel and adjacent to the [on] top of [a] the top plate.

22. The apparatus of claim 12 wherein said plate tabs having a predetermined area and a plurality of nail holes as an attaching means [for attachment] to the horizontal, top edge of said top plate, generally next to the roof structural member, and said plate tabs having extension tabs on the top bent inward toward said rectangular face.
23. The apparatus of claim 12 wherein said sheathing tabs, said rafter tabs, and said plate tabs having attaching means to adjacent structural members, thereby forming a strong I-beam shape against the roof and wall structural members, as a means for preventing uplift and lateral movement.
24. The apparatus of claim 12 wherein said [lower extension] single tab on the bottom of said rectangular face, and said plate tabs having a generally perpendicular aspect to each other, and having attaching means to the adjacent, vertical and horizontal faces of [said] a top plate, thereby placing fasteners in shear, and suppressing thrust forces from the roof to the wall on a building.
25. The apparatus of claim 12 wherein said sheathing tabs, said rafter tabs, said plate tabs, said rectangular face, and said [lower part] single tab on the bottom of said rectangular face form a strong, generally box-shape connection between [said] adjacent rafters, [said] top plate, and [said] roof sheathing on a building, thereby preventing uplift, thrusting, and lateral movement of the roof and the wall, as would occur during wind storms and seismic events.
26. A retrofit apparatus for securing structural members of an existing building comprising:
- a. two generally flat and generally rectangular planes forming left and right faces;
  - [a] b. [two generally flat,] said rectangular faces having approximately right angled bends on opposite ends of the short sides, forming rafter tabs having a plurality of nail holes;
  - [b] c. said rectangular faces each having [the lower] a single tab on the long side of the bottom extended down, and having a predetermined area and a plurality of nail holes as a means



- for attachment to outside wall sheathing and an underlying top plate;
- [c] d. said rectangular faces each having an approximately right angled bend[s] on top of the long dimension, forming a sheathing tab[s] on opposite ends;
- [d] e. one of said faces having horizontal tracks with openings on one end, and the other face having runners with arms in the same plane, as a sliding means of lateral sliding of both plates.
27. The apparatus of claim 26 wherein said left and right faces having [near] approximate mirror image of each other.
28. The apparatus of claim 26 wherein said tracks on one face allow said runner of other face to enter at the opening, while said arms allow [horizontal] slideable movement along said track.
29. The apparatus of claim 26 wherein said plates move horizontally when coupled together with said runners and said tracks as a means of placing said rafter tabs against vertical faces of adjacent rafters
30. The apparatus of claim 26 wherein said coupled plates move horizontally as a means of placing said rafter tabs against vertical faces of adjacent rafters that [were] are not placed at standard construction spacing.
31. The apparatus of claim 26 wherein said rafter tabs, said [extended bottoms] lower tab on each said rectangular face[s], and said sheathing tabs having attachment to said rafters, said outside wall sheathing, and said underlying top plate forming a box-like shape, thereby preventing uplift, thrusting, and lateral movement of a roof and wall of an existing building during strong winds and earth movements.